

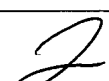


DART AEROSPACE LTD	Work Order:	22961
Description: Support Assembly	Part Number:	D3278-041
Dwg: D3278 Rev. A	Qty:	80 79
		Page 1 of 2

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler DWG NOT REQUIRED 104.07.05	TH	05.04.13	80
2	MV	Cut blanks: 2.00" x 1.00" x 2.550" long Material: 6061-T6/T651 (QQ-A-200/8) 1.00" thick (M6061T6B1.000x02.000) Identify for D3278-1 Batch: M15549 M17365	RE	05/03/20	80
3	MV	Cut blanks: 2.00" x 1.00" x 2.550" long Material: 6061-T6/T651 (QQ-A-200/8) 1.00" thick (M6061T6B1.000x02.000) Identify for D3278-2 Batch: M17365 M15549	EP SD	05/04/27 05.04.23	80
4	MV	Machine D3278-1 as per Folio FA405 and Dwg D3278 Identify as D3278-1	SD	05.04.23	80 79
5	QC2	Inspect parts as they come off the CNC machine	SD	05.04.23	80 79
6	MV	Deburr and Tumble	SD	05.04.24	80 79
7	QC8	Second check	EP	05/04/30	79
8	MV	Machine D3278-2 as per Folio FA405 and Dwg D3278 Identify as D3278-2	SD	05.04.24	80
9	QC2	Inspect parts as they come off the CNC machine	SD	05.04.24	80
10	MV	Deburr and Tumble	SD	05/04/28	80
11	QC8	Second check	EP	05/04/30	80
12	FP	Acid etch and Alodine as per QSI 005 4.1	FF	05/5/2	80
13	QC5	Inspect work to Step 12	ML	05 05 02	80
14	FP	Powder Coat Gloss White (Ref: 4.3.5.1) as per QSI 005 4.3	ML	05 05 02	80
15	QC3	Inspect Powder Coat	SP	05/05/03	80 D3278-2 79 D3278-1
16	GA	Rivet spacers with support as per Dwg D3278. (Note: D3278-1/-2 are on BOM as material from Steps 2-3) Pick: Packing Kit Qty Part Number Description Batch 1 D3278-1 Support D22961 1 D3278-2 Support S22961 1 D3278-3 Spacer B21961 B22971 4 MS20426AD3-6 Rivet M16507	SP	05/05/03	79 PTO
17	QC5	Inspect work to Step 16	J	05.05.16	79

RELEASED

04/04/04-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
05-05-18	16	MS20426A03-6 rivet to short, change rivet to MS20426A03-7 (No -7 in stock LL. put them on order) Permanent Change		05-06-09	N/A	 05.05.18 per 05142	 05-05-18

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
05/04/07	#4	(3278-1) scrap scrap problem with tooling. (Both O.D. and S.D.)	 05-05-07	Scrap + Replace.	SD 06.04.25	 05-05-02	 per 05142	 05-05-02
05/05/01	15	1x D3278-2 part left over.	 per 05142	Put back in Store	 05/05/03	 05-06-02	 per 05142	 05-05-24
05.05.05	16	Rivets too short. HEAD SHOULD BE 20.045", BUT 0.020" ON MANY	UP 05.05.16	PARTS ARE OK.	 05-05-16	 05-05-16	UP 05.05.16 per 05142	 05-05-18

Part No: D3278-041 PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: Date: 05/06/09

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD	Work Order:	22961
Description: Support Assembly	Part Number:	D3278-041
Dwg: D3278 Rev. A	Qty:	
Page 2 of 2		

Step	Location	Procedure	By	Date	Qty																								
18	GA	Assemble support as per Dwg D3278 Pick: Packing Kit <table><thead><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr></thead><tbody><tr><td>2</td><td>D2230-1</td><td>Clamp</td><td>B22163C</td></tr><tr><td>2</td><td>AN4-13A</td><td>Bolt</td><td>B22163B</td></tr><tr><td>4</td><td>AN960JD416</td><td>Washer</td><td>M16582</td></tr><tr><td>2</td><td>MS21042L4</td><td>Nut (or -4)</td><td>M15993</td></tr><tr><td></td><td></td><td></td><td>M15924</td></tr></tbody></table> Identify as D3278-041	Qty	Part Number	Description	Batch	2	D2230-1	Clamp	B22163C	2	AN4-13A	Bolt	B22163B	4	AN960JD416	Washer	M16582	2	MS21042L4	Nut (or -4)	M15993				M15924	SB	05/05/16	79
Qty	Part Number	Description	Batch																										
2	D2230-1	Clamp	B22163C																										
2	AN4-13A	Bolt	B22163B																										
4	AN960JD416	Washer	M16582																										
2	MS21042L4	Nut (or -4)	M15993																										
			M15924																										
19	QC5	Inspect work to Step 18	2	05.05.24	79																								
20	ST	Identify and Stock	ml	05/05/31	79																								
21	AC	Cost / part 51.61	Sur	05-05-31	79																								
22	DC	Close W/O 52.51 Inspect Level 21	SA	05.06.06	79																								

Rev	Date	Change	Revised By	Approved
A	04.04.19	New issue	KJ/JLM	04/04/22

RELEASED
04/04/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
05.05.18	18	DO NOT TIGHTEN AN4-13A BOLTS. LEAVE LOOSE TO ALLOW CUSTOMER TO ADJUST FIT ON XTUBE <i>Permanent Change</i>	<i>[Signature]</i>	05-06-07	N/A	<i>CP</i> 05.05.18 per QSI 692	<i>2</i> 05-05-18

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD		Work Order:	22961
Description: Support		Part Number:	D3278-1
Inspection Dwg: D3278	Rev: A	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.005/-0.000	0.098	✓			
0.365	+/-0.010	0.368	✓			
0.615	+/-0.010	0.625	✓			
0.250	+/-0.010	0.251	✓			
1.480	+/-0.010	1.480	✓			
R0.125	+/-0.010	0.125	✓			
0.125	+/-0.010	0.118	✓			
2.439	+/-0.010	2.433	✓			
1.980	+/-0.010	1.987	✓			
R0.130	+/-0.010	0.130	✓			
Ø0.257	+0.005/-0.000	Ø.259	✓			
R0.375	+/-0.010	0.357	✓			
0.875	+/-0.010	0.874	✓			
0.500	+/-0.010	0.499	✓			
R0.400	+/-0.010	0.400	✓			
1.720	+/-0.010	1.723	✓			
R0.125	+/-0.010	0.125	✓			
0.125	+/-0.010	0.126	✓			

Measured by:	EP	Audited by:	SD	Prototype Approval:	N/A
Date:	05/04/27	Date:	05/04/28	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.19	New Issue	P/O D3278-041	KJ/JLM

RELEASED
 05/04/28

DART AEROSPACE LTD		Work Order:	22961
Description: Support		Part Number:	D3278-2
Inspection Dwg: D3278 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.005/-0.000	Ø.098	/			
0.365	+/-0.010	.365	/			
0.615	+/-0.010	.621	/			
0.250	+/-0.010	.252	/			
1.480	+/-0.010	1.479	/			
R0.125	+/-0.010	R.125	/			
0.125	+/-0.010	.122	/			
2.439	+/-0.010	2.430	/			
1.980	+/-0.010	1.976	/			
R0.130	+/-0.010	R.125	/			
Ø0.257	+0.005/-0.000	Ø.257	/			
R0.375	+/-0.010	R.375	/			
0.875	+/-0.010	.875	/			
0.500	+/-0.010	.495	/			
R0.400	+/-0.010	R.406	/			
1.720	+/-0.010	1.721	/			
R0.125	+/-0.010	R.125	/			
0.125	+/-0.010	.128	/			

Measured by:	SD	Audited by:	En	Prototype Approval:	N/A
Date:	05.04.24	Date:	05/04/27	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.19	New Issue P/O D3278-041	KJ/JLM	

RELEASED

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Apr 11, 2005
07:31 am

Work Order No : 0022961
Project Name : D3278-041
Project For : WK519
Work Order Type : Main
Main WO Number :
House Part Number : D3278-041
Description : Support Assembly
Manufactured : Yes
Amount Req'd : 80
Amount Done : 0
Start Date : 04-08-05
Est Finish Date : 05-07-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00

Order Entry No :
OE Value : 0.00

Est Mark Up : 0.000%
Actual Mark Up : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

Chris Provencal

From: "David Shepherd" <davids@dartaero.com>
To: "Chris Provencal" <chrisp@dartaero.com>
Sent: May 13, 2005 1:22 PM
Subject: Re: 350 Clamp

Chris,

I think this should have been caught after a few rivets, but I think the parts are acceptable as is.

David

----- Original Message -----

From: Chris Provencal
To: David Shepherd
Sent: Thursday, May 05, 2005 2:16 PM
Subject: Fw: 350 Clamp

----- Original Message -----

From: Chris Provencal
To: David Shepherd
Sent: Wednesday, May 04, 2005 12:55 PM
Subject: 350 Clamp

The compressed head of the rivet should be about 0.046" (1/2D of 3/32 rivet), but can be as small as 0.020" for many.

For the future I will tell Dan he can use longer rivets as needed to get the proper head, and he can approve it based on qsi 042.

I included a picture of the scratches for reference, we will be using a common-sense approach to use the least scratched side for the top. Bill agrees that white would be good but we don't want to wake the sleeping giant that is Eurocopter.

Sincerely,

Chris Provencal

DART Aerospace Ltd.

Email...chrisp@dartaero.com

Phone...613-632-3336

Fax.....613-632-4443

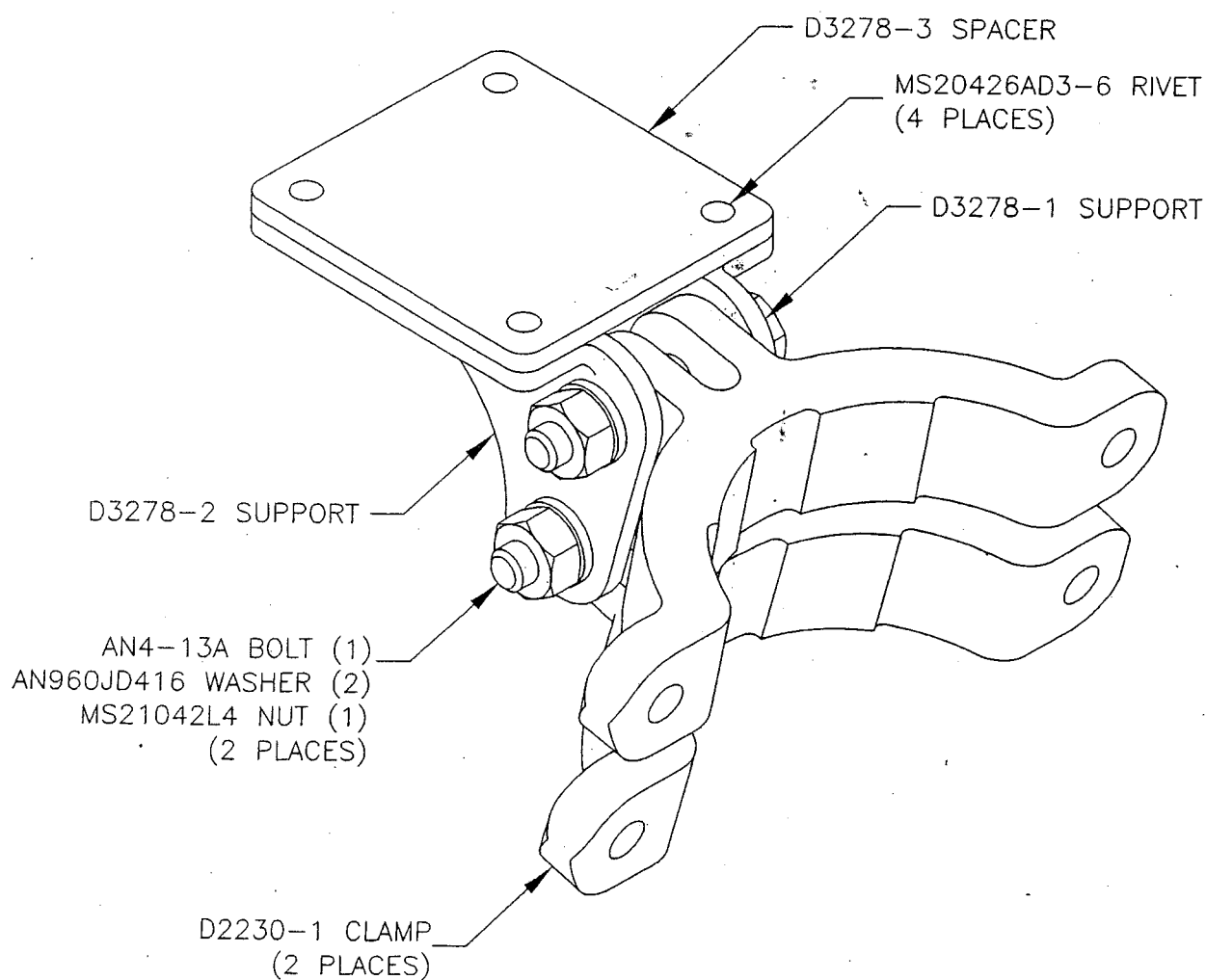


CONTROLLED COPY

RELEASED
21.04.05

DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3278	REV. A SHEET 1 OF 3
DATE 04.03.03		TITLE SUPPORT ASSEMBLY	SCALE NTS
A	04.03.03	NEW ISSUE	

D3278-041 SUPPORT ASSEMBLY



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